

Release notes for ENDF/B Development photoat-078\_Pt\_000  
evaluation

**ENDF**  
**B-VII**.dev

October 13, 2016

- checkr Warnings:

1. A previous error halted parsing of the current section  
*MAT=7800, MF= 1, MT=451 (1): Parsing stopped*

```
ERROR(S) FOUND IN MAT=7800, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      165 TO      199
```

- checkr Errors:

1. A variable is outside the allowed ENDF range  
*MAT=7800, MF= 1, MT=451 (0): Variable range*

```
ERROR(S) FOUND IN MAT=7800, MF= 1, MT=451
MOD =      3 OUT OF RANGE      0 -      1      RECORD NUMBER      165
```

2. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=501 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7800, MF=23, MT=501
SECTION 23/501 NOT IN DIRECTORY      RECORD NUMBER      201
```

3. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=502 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7800, MF=23, MT=502
SECTION 23/502 NOT IN DIRECTORY      RECORD NUMBER      1061
```

4. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=504 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7800, MF=23, MT=504
SECTION 23/504 NOT IN DIRECTORY      RECORD NUMBER      1453
```

5. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=515 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7800, MF=23, MT=515
SECTION 23/515 NOT IN DIRECTORY      RECORD NUMBER      1494
```

6. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=516 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7800, MF=23, MT=516
SECTION 23/516 NOT IN DIRECTORY      RECORD NUMBER      1529
```

7. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=517 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=517  
SECTION 23/517 NOT IN DIRECTORY RECORD NUMBER 1584

8. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=522 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=522  
SECTION 23/522 NOT IN DIRECTORY RECORD NUMBER 1626

9. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=534 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=534  
SECTION 23/534 NOT IN DIRECTORY RECORD NUMBER 2025

10. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=535 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=535  
SECTION 23/535 NOT IN DIRECTORY RECORD NUMBER 2045

11. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=536 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=536  
SECTION 23/536 NOT IN DIRECTORY RECORD NUMBER 2068

12. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=537 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=537  
SECTION 23/537 NOT IN DIRECTORY RECORD NUMBER 2091

13. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=538 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=538  
SECTION 23/538 NOT IN DIRECTORY RECORD NUMBER 2114

14. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=539 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=23, MT=539  
SECTION 23/539 NOT IN DIRECTORY RECORD NUMBER 2140

15. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=540 (0): Directory (b)*

- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=540 | RECORD NUMBER | 2169 |
| SECTION 23/540 NOT IN DIRECTORY           |               |      |
16. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=541 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=541 | RECORD NUMBER | 2198 |
| SECTION 23/541 NOT IN DIRECTORY           |               |      |
17. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=542 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=542 | RECORD NUMBER | 2231 |
| SECTION 23/542 NOT IN DIRECTORY           |               |      |
18. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=543 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=543 | RECORD NUMBER | 2261 |
| SECTION 23/543 NOT IN DIRECTORY           |               |      |
19. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=544 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=544 | RECORD NUMBER | 2289 |
| SECTION 23/544 NOT IN DIRECTORY           |               |      |
20. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=545 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=545 | RECORD NUMBER | 2322 |
| SECTION 23/545 NOT IN DIRECTORY           |               |      |
21. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=546 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=546 | RECORD NUMBER | 2355 |
| SECTION 23/546 NOT IN DIRECTORY           |               |      |
22. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=547 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=7800, MF=23, MT=547 | RECORD NUMBER | 2401 |
| SECTION 23/547 NOT IN DIRECTORY           |               |      |
23. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=548 (0): Directory (b)*

- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=548 |                    |
|  | SECTION 23/548 NOT IN DIRECTORY           | RECORD NUMBER 2448 |
24. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=549 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=549 |                    |
|  | SECTION 23/549 NOT IN DIRECTORY           | RECORD NUMBER 2507 |
25. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=550 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=550 |                    |
|  | SECTION 23/550 NOT IN DIRECTORY           | RECORD NUMBER 2564 |
26. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=551 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=551 |                    |
|  | SECTION 23/551 NOT IN DIRECTORY           | RECORD NUMBER 2601 |
27. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=552 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=552 |                    |
|  | SECTION 23/552 NOT IN DIRECTORY           | RECORD NUMBER 2646 |
28. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=553 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=553 |                    |
|  | SECTION 23/553 NOT IN DIRECTORY           | RECORD NUMBER 2689 |
29. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=554 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=554 |                    |
|  | SECTION 23/554 NOT IN DIRECTORY           | RECORD NUMBER 2752 |
30. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=23, MT=559 (0): Directory (b)*
- |  |   |                    |
|--|---|--------------------|
|  | ERROR(S) FOUND IN MAT=7800, MF=23, MT=559 |                    |
|  | SECTION 23/559 NOT IN DIRECTORY           | RECORD NUMBER 2815 |
31. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=27, MT=502 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=27, MT=502  
SECTION 27/502 NOT IN DIRECTORY RECORD NUMBER 2858

32. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=27, MT=504 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=27, MT=504  
SECTION 27/504 NOT IN DIRECTORY RECORD NUMBER 2907

33. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=27, MT=505 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=27, MT=505  
SECTION 27/505 NOT IN DIRECTORY RECORD NUMBER 2957

34. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7800, MF=27, MT=506 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7800, MF=27, MT=506  
SECTION 27/506 NOT IN DIRECTORY RECORD NUMBER 3116

- **linear** Errors:

1. Negative cross section found  
*0: Neg. Sig(E)*

```
Linearize ENDF/B Cross Sections (LINEAR 2015-1)
-----
Retrieval Criteria----- MAT
Monitor Mode----- Off
Minimum Cross Section----- 1.0000E-10 (Default Option)
... [73 more lines]
```

- **fudge-4.0** Warnings:

1. generic warning message  
*reaction label 0: Pt + gamma [coherent] / Product: gamma (Error # 0): Warning*

WARNING: coherentScattering is not a valid distribution component for 2-body reaction

2. FIXME: Generic fudge unimplemented message  
*reaction label 0: Pt + gamma [coherent] / Product: gamma (Error # 2): Generic unimp (c)*

WARNING: Checking not yet implemented for pointwise type data

3. generic warning message  
*reaction label 1: Pt + gamma [incoherent] / Product: gamma (Error # 0): Warning*

WARNING: incoherentScattering is not a valid distribution component for 2-body reaction

4. FIXME: Generic fudge unimplemented message  
*reaction label 1: Pt + gamma [incoherent] / Product: gamma (Error # 2): Generic unimp (c)*

WARNING: Checking not yet implemented for piecewise type data

5. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule  
*summedReaction label 26: total (Error # 0): Sumrule*

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 100.00%

6. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule  
*summedReaction label 28: photoelectric absorption (Error # 0): Sumrule*

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 66.54%

• fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree  
*reaction label 0: Pt + gamma [coherent] / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

2. 2-body reaction not in center-of-mass frame  
*reaction label 0: Pt + gamma [coherent] / Product: gamma (Error # 1): 2-body not in COM*

WARNING: 2-body reaction not in center-of-mass frame!

3. Calculated and tabulated thresholds don't agree  
*reaction label 1: Pt + gamma [incoherent] / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

4. 2-body reaction not in center-of-mass frame  
*reaction label 1: Pt + gamma [incoherent] / Product: gamma (Error # 1): 2-body not in COM*

WARNING: 2-body reaction not in center-of-mass frame!

5. Energy range of data set does not match cross section range  
*reaction label 1: Pt + gamma [incoherent] / Product: gamma / Distribution incoherentScattering - piecewise: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (0.0 -> 1000000000.0) vs (1.0 -> 1e+11)

6. Calculated and tabulated thresholds don't agree  
*reaction label 2: e- + e+ + Pt [electron field] / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2.044e6 eV!

7. Calculated and tabulated thresholds don't agree  
*reaction label 3:  $e^- + e^+ + Pt$  [nuclear field] / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!
8. Calculated and tabulated thresholds don't agree  
*reaction label 4:  $e^- + Pt1s1/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 78615. eV!
9. Calculated and tabulated thresholds don't agree  
*reaction label 5:  $e^- + Pt2s1/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 13862. eV!
10. Calculated and tabulated thresholds don't agree  
*reaction label 6:  $e^- + Pt2p1/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 13313. eV!
11. Calculated and tabulated thresholds don't agree  
*reaction label 7:  $e^- + Pt2p3/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 11567. eV!
12. Calculated and tabulated thresholds don't agree  
*reaction label 8:  $e^- + Pt3s1/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3273.2 eV!
13. Calculated and tabulated thresholds don't agree  
*reaction label 9:  $e^- + Pt3p1/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3022. eV!
14. Calculated and tabulated thresholds don't agree  
*reaction label 10:  $e^- + Pt3p3/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2636.9 eV!
15. Calculated and tabulated thresholds don't agree  
*reaction label 11:  $e^- + Pt3d3/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2212.4 eV!
16. Calculated and tabulated thresholds don't agree  
*reaction label 12:  $e^- + Pt3d5/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2129. eV!
17. Calculated and tabulated thresholds don't agree  
*reaction label 13:  $e^- + Pt4s1/2$  / Cross section: (Error # 0): Threshold mismatch*  

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 712.21 eV!



18. Calculated and tabulated thresholds don't agree  
*reaction label 14:  $e^- + Pt4p1/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 604.1900000000001 eV!
19. Calculated and tabulated thresholds don't agree  
*reaction label 15:  $e^- + Pt4p3/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 512.04 eV!
20. Calculated and tabulated thresholds don't agree  
*reaction label 16:  $e^- + Pt4d3/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 333.1 eV!
21. Calculated and tabulated thresholds don't agree  
*reaction label 17:  $e^- + Pt4d5/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 315.96 eV!
22. Calculated and tabulated thresholds don't agree  
*reaction label 18:  $e^- + Pt4f5/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 85.48999999999999 eV!
23. Calculated and tabulated thresholds don't agree  
*reaction label 19:  $e^- + Pt4f7/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 81.87 eV!
24. Calculated and tabulated thresholds don't agree  
*reaction label 20:  $e^- + Pt5s1/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 108.44 eV!
25. Calculated and tabulated thresholds don't agree  
*reaction label 21:  $e^- + Pt5p1/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 73.34 eV!
26. Calculated and tabulated thresholds don't agree  
*reaction label 22:  $e^- + Pt5p3/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 57.74 eV!
27. Calculated and tabulated thresholds don't agree  
*reaction label 23:  $e^- + Pt5d3/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 11.02 eV!
28. Calculated and tabulated thresholds don't agree  
*reaction label 24:  $e^- + Pt5d5/2$  / Cross section: (Error # 0): Threshold mismatch*  
  
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 9.539999999999999 eV!

29. Calculated and tabulated thresholds don't agree  
*reaction label 25:  $e^- + Pt6s1/2$  / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 8.07 eV!

30. Calculated and tabulated thresholds don't agree  
*summedReaction label 26: total / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

31. Calculated and tabulated thresholds don't agree  
*summedReaction label 27: pair product / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!

32. Calculated and tabulated thresholds don't agree  
*summedReaction label 28: photoelectric absorption / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 8.07 eV!

• **xsectplotter** Warnings:

1. Encountered runtime warning in xsectplotter or Fudge or matplotlib  
*Error: RuntimeWarning*

stderr while processing crossSection

/usr/local/lib/python2.7/site-packages/matplotlib-1.3.1-py2.7-linux-x86\_64.egg/matplotlib/pyplot.py:412: RuntimeWarning  
... [3 more lines]